The Connecticut Agricultural Experiment Station, New Haven

Inspection of Commercial Fertilizers 1993

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From January 1, 1993 to December 31, 1993 one-hundred and fourteen samples of fertilizer were collected by inspectors of the Connecticut Department of Agriculture. The samples were examined by the Analytical Chemistry Department of the Connecticut Agricultural Experiment Station for compliance of the label guarantees with State of Connecticut Regulations. Included in this Bulletin are the results of the analyses of the macronutrients, nitrogen, phosphoric acid, and potash, for the samples.

The results of these analyses are included in Table 1. This year 28 manufacturers are represented in the survey. A sample is considered unsatisfactory if the value for a parameter is below the guaranteed value by more than the permissible percentage established by the Association of American Plant Food Control Officials. We found 16 samples (14.0%) to be deficient in nitrogen, 8 samples (7.0%) to be deficient in phosphoric acid, and 6 samples (5.2%) to be deficient in potash. A total of 28 samples (24.6%) were deficient in one or more parameters. A deficiency in one of the macronutrients is indicated by a minus (-) sign next to the "Found%" value in Table 1.

Table 2 summarizes the total tonnage of several multiple nutrient fertilizers sold in Connecticut for the period indicated. Table 3 lists the tonnage of some additional fertilizer materials sold in Connecticut during the same period.

The samples were collected by Alton VanDyke, the Fertilizer Control Official for the Connecticut Department of Agriculture. The analyses were performed by Craig Musante and Mamie Pyles under the supervision of Dr. David Stilwell.

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Table 1. Analysis of individual fertilizer samples.

	N		P_2O_5		K_2O	
	Guar%	Found%	Guar%	Found%	Guar%	Found%
AGRITURF						
Agriturf	20	20.6	10	0.6	15	20.6
AGWAY, INC.						
Agway Bulk	28	30.4	11	11.7	11	11.2
Agway Bulk	46	46.5	0	0	0	
Agway Bulk	28	29.0	11	14.2	11	10.9
Agway Bulk	37	40.1	0	11	10.3	
Agway Bulk	27	27.3	5	6.0	18	18.6
Agway Bulk	0	2.3	11	12.2	46	52.2
Agway Bulk	23	23.9	13	13.1	18	18.6
Agway Bulk	23	24.9	12	9.1-	18	19.9
Agway Bulk	22	22.6	14	18.2	17	20.4
Agway Bulk	23	24.9	12	12.3	18	17.9
Agway Bulk	23	23.9	12	13.8	18	19.2
Agway Bulk	0	3.8	14	15.2	42	45.3
Agway Grassroots Lawn	27	22.6-	2	3.0	11	12.2
Agway Greenlawn Lawn	32	38.8	3	3.4	5	6.4
Agway Garden Plant	5	5.4	10	13.5	5	5.6
Agway Blend-Rite	15	10.5-	15	14.9	15	16.4
Agway Nature's Way	4	4.9	5	5.2	4	3.3-
Agway Early Edge Crop	10	10.3	20	19.4	10	11.8
Agway Blend-Rite	5	5.3	10	10.6	10	9.3
Agway Blend-Rite	15	17.4	8	10.1	12	12.4
Agway Blend-Rite	10	8.2-	10	9.0	10	10.4
Agway Early Edge	13	12.5	13	13.3	13	14.1
A.H. HOFFMAN, INC						
Hoffman Vegetable	5	5.0	10	9.8	5	5.1
Hoffman Plant & Shrub	5	7.3	20	5.5-	10	5.5-
CADWELL & JONES						
C&J Specialty	10	14.8	10	14.8	10	11.9
C&J Specialty	18	19.8	5	6.8	10	11.6
C&J Super Surge	20	15.0-	10	13.3	10	15.0
C&J Specialty	5	5.3	10	11.6	10	7.8-
Old Fox	25	22.0-	5	5.4	10	10.2
C&J Specialty	10	8.1-	20	20.1	10	10.4
C&J Specialty	18	20.2	23	24.1	12	13.7
C&J Specialty	18	17.5	11	9.9-	17	18.2
C&J Surge	7	7.1	7	8.2	7	7.5
C&J Fall Feed	25	25.5	5	6.3	20	23.0
C&J Turf Green Gro	20	18.5-	4	5.4	8	12.0
C&J Turf Grow	10	9.8	6	6.5	4	4.4
C&J Specialty	5	7.7	10	17.4	5	6.8
CAROLINA EASTERN VAIL						
Carovail	10	11.1	10	12.7	10	11.7
Carovail Fertilizer	10	10.6	10	10.6	10	10.1

Table 1. Analysis of individual fertilizer samples (continued).

	N		P_2O_5		K_2O	
	Guar%	Found%	Guar%	Found%	Guar%	Found%
CHEVRON CHEMICAL CO						
Ortho Bulb Food	4	5.1	12	14.9	8	9.5
Ortho Rose Food	8	10.0	12	13.1	4	3.8
Ortho Flower Garden Food	11	17.3	8	12.0	7	9.7
Ortho Vegetable Food	8	9.8	10	12.5	8	6.9-
Ra Pid Gro Bloom	19	19.5	24	26.6	18	19.1
Ra Pid Gro Tom/Veg	18	17.7	21	21.2	21	21.1
CLINTON NURSERY PRODUCTS, INC.						
New Era Violet Food	4	6.2	10	11.5	10	11.7
New Era 100% Organic	3	3.1	5	6.6	1	1.4
New Era Plant Food	8	8.9	8	8.8	8	9.2
New Era Flowering Plant	6	7.1	12	15.7	6	8.7
New Era Regular Plant	12	12.0	6	7.3	6	8.4
CROP PRODUCTION SERVICES						
CPS	10	7.4-	8	11.0	10	13.4
Village Green Premium	18	15.8-	3	3.8	3	3.4
CPS 10-10-10	10	8.7-	10	9.8	10	9.3
CPS Custom Kosut	22	22	11	11.8	22	21.3
CPS	24	24.9	12	12.7	18	18.2
Village Green Professional	20	13.6-	10	11.0	10	9.5
CPS	5	4.2-	10	9.3	10	11.1
CPS	10	6.0-	10	7.9	10	7.1
CPS	15	15.1	10	12.7	10	10.3
Village Green Professional	24	23.8	3	4.9	5	5.1
Nassau Suffolk Turf	14	11.1-	14	13.6	14	24.3
CPS	10	9.2-	10	10.5	10	10.4
CPS	10	12.8	6	1.4-	4	3.0
CPS	10	9.6	20	20.6	20	20.7
CPS	15	15.3	10	12.8	10	11.2
CPS	5	2.6-	10	5.9-	10	8.2
ESPOMA CO.						
Espoma Organic	18	18.0	8	11.4	6	5.8
Espoma Bulb-Tone	4	4.9	10	13.0	6	8.5
Espoma Holly-Tone	4	4.5	6	5.8	4	10.7
Espoma garden-Tone	4	4.1	6	8.0	6	8.7
Espoma Plant-Tone	5	5.4	3	5.2	3	8.1
FISH N' GRO						
Fish 'n Gro Plant Food	1.1	0.8	0.5	1.0	0.3	0.3
GRACE SIERRA HORT. PRODS. CO						
Peter's Concentrated	5	6.0	10	11.8	5	6.2
Peter's Professional	20	22.1	20	23.3	20	21.9
Peter's Professional Soluable	15	15.2	30	35.4	15	18.2
Once Season Long Plant	16	16.5	8	9.4	12	14.3
Osmocote Time Release	17	16.9	6	6.4	10	13.2

Table 1. Analysis of individual fertilizer samples (continued).

	N		P_2O_5		K_2O	
	Guar%	Found%	Guar%	Found%	Guar%	Found%
GREEN CHARGER FERTILIZER CO.						
Green Charger	10	10.5	10	11.7	10	11.3
Green Charger	5	6.9	10	12.9	10	12.6
Green Charger	5	7.0	10	14.3	5	9.4
JRM CHEMICAL DIV.						
Soil Moist Plus	5	10.0	5	2.3-	5	2.3
LEBANON CHEMICAL CORP.						
Greenview Green Start	9	12.8	17	18.7	9	12.5
MILLORGANITE DIV. MMSD						
Millorganite	6	6.7	2	1.9	0	
OFFSHORE VENTURES INC.						
Squanto's Secret Plant	2	2.3	4	4.6	2	2.3
O.M. SCOTT & SONS CO.						
Scotts Turf Builder Plus	28	28.7	3	2.7	3	4.8
Scotts Turf Builder	29	29.7	3	2.2-	4	3.8
Scotts Super Turf	35	35.4	3	2.9	5	5.0
Scotts New Generation	14	13.9	3	4	6	8.6
Scotts Turf Builder	29	29.6	3	3.1	4	5.8
Scotts Super Turf	35	37.0	3	3.3	5	5.7
Scotts Starter	20	22.8	27	28.4	5	5.8
PARKER FERTILIZER CO.						
Home & Garden Showplace	30	32.4	3	1.4-	10	12.4
Home & Garden Showplace	20	22.0	5	4.7	18	16.8-
PLANT RESEARCH LABORATORIES						
Oxygen Plus Indoor	1	1.3	2	2.2	1	1.1
PLANTABBS CORP						
Plantabbs House Plant Food	11	11.0	15	14.5	20	21.6
RINGER CORP.						
Ringer Vegetable Garden	8	7.8	5	5.6	5	5.1
Ringer Lawn	9	9.4	4	5.2	4	5.8
ROSS DANIELS, INC.						
Ross Gro-Stakes-Evergreens	10	14.1	10	11.9	10	11.8
Ross Gro-Stakes-Trees&shrubs	16	16.8	10	10.2	9	10.0
Ross Gro-Stakes-Fruits	8	13.2	16	20.6	16	12.2-
SCHULTZ CO						
Schultz Instant	8	9.0	14	15.8	9	10.4
Schultz Instant Liquid	10	10.7	15	15.7	10	10.9

Table 1. Analysis of individual fertilizer samples (continued).

	N		P_2O_5		K_2O	
	Guar%	Found%	Guar%	Found%	Guar%	Found%
STERN'S MIRACLE GRO PRODUCTS, INC.						
Stern's Miracid Plant Food	30	30.5	10	11.2	10	9.6
Stern's Liquid Miracle Gro	8	8.8	7	8.4	6	7.0
Stern's Liquid Miracle Gro	7	8.0	7	8.1	7	8.3
Stern's Miracle Gro Plant Food	15	15.9	30	32.5	15	19.9
Miracle Gro Plant	6	6.3	12	12.1	6	6.0
THE HY-TROUS CO						
Hy-Trous Liquid	5	5.8	10	11.6	5	5.4
Hy-Trous African Violet	4	4.9	12	11.4	4	4.3
UNIVERSAL CHEMICAL CO.						
Electra Plant Food 5-10-3	5	5.0	10	13.6	3	3.9
WEATHERLY CONSUMER PRODUCTS, INC						
Jobes Plant Food Spikes	13	15.1	4	4.7	5	5.5
Jobes All Natural Tomato	4	7.5	8	8.1	8	7.5
Jobes Plant Food Spikes	10	11.6	10	12.2	4	5.7

Table 2. Multiple nutrient fertilizers shipped in Connecticut from July 1,1992 to June 30, 1993.[1]

Grade	Tons	Grade	Tons
0-10-40	20.33	18-24-12	30.0
0-15-30	13.6	19-3-4	23.5
1-1-1	49.19	19-3-6	28.2
4-5-4	139.41	19-3-12	273.87
4-6-4	826.55	19-19-19	441.98
5-10-5	687.01	20-3-3	212.28
5-10-10	456.88	20-5-10	44.13
6-0-18	20.39	20-8-8	23.4
6-2-1	466.00	20-10-10	215.96
8-8-8	101.4	20-10-20	17.0
8-10-8	11.62	20-10-25	181
8-12-4	20.26	20-20-20	28.48
8-16-16	28.4	22-0-16	13.98
10-5-10	95.24	22-0-22	47.06
10-6-4	580.15	24-3-5	13.0
10-6-12	46.00	24-3-7	116
10-8-10	765	24-12-18	444
10-10-10	1875.41	25-3-3	55.83
10-15-15	10.31	25-3-5	125.63
10-18-10	111.73	25-3-10	82.94
10-20-10	252.29	25-4-8	59.88
10-20-15	100.95	26-3-3	36.24
10-20-10	243.43	26-4-6	102.8
12-4-8	32.74	28-3-3	921.48
12-12-12	20.58	28-3-4	455.57
13-3-7	12.83	28-3-8	198.56
13-13-13	184.89	28-3-10	304.13
13-25-12	83.09	28-4-8	67.34
14-3-3	11.3	28-5-11	19.43
14-3-6	61.64	29-3-4	1034.71
14-22-6	20.34	29-3-5	17.42
15-3-5	14.63	30-0-15	46.56
15-5-5	32.14	30-3-3	101.29
15-8-12	359.12	30-10-10	42.84
15-10-10	84.00	32-3-5	89.92
15-15-15	466.83	32-3-10	234.96
15-30-15	211.90	32-4-8	255.65
16-4-8	15.02	32-5-7	109.05
16-8-8	22.58	33-3-6	12.66
16-32-16	42.77	33-3-10	12.36
18-0-18	29.6	35-3-5	343.43
18-4-10	33.38	36-6-6	33.72
18-5-9	58.93		

Total tonnage: 38,092. Tonnage of listed grades: 15,638.

[1] To be included in the table a grade must have been manufactured by at least two different manufacturers with a total tonnage for all manufacturers of greater than 10 tons.

Table 3. Tonnages of selected fertilizer materials sold in Connecticut from July 1,1992 to June 30, 1993.

CHEMICAL NITROGEN	TONS
ammonium nitrate	77.15
calcium nitrate	172
ammonium sulfate	10.3
urea	2656.7
PHOSPHATES	
diammonium phosphate	1.0
monoammonium phosphate	1245.72
superphosphate, normal	4.0
superphosphate, triple	129.87
bone meal, steamed	29.57
POTASH	
muriate of potash	1728.3
potassium sulfate	12.25

ORGANICS	TONS
manure	1635.28
blood, dried	70.19
sludge, sewage	466.0
SECONDARY & MICRONUTRIENTS	
aluminum sulfate	1.89
borax	44.78
ferrous sulfate	0.15
iron chelate	12.39
gypsum (calcium sulfate)	357.0
sulfur	2.76
magnesia	0.38

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